Nevada Division of Water Planning

Board For Financing Water Projects

POLICY ON REASONABLE WATER RATES & DEPRECIATION

March 4, 1998

BACKGROUND

The Division of Water Planning, together with the Board for Financing Water Projects (State), evaluates water rates in communities receiving AB 198 Grant Program funds. The Division uses a simplified procedure to evaluate rates (described below) which should not be confused with accounting relationships or audit procedures and terms which are governed by Generally Accepted Accounting Practices etc.

After evaluation of a utility's water rates and as a condition for receiving State grant funds, the Board may require a utility to make financial changes which will enhance the viability of the utility.

The State's objective in evaluating rates is to ensure that the water rates in place in a community are sufficient to ensure the financial strength of the utility. Through the rate analysis, the Division confirms that grant recipients will have sufficient revenues to: 1) operate and maintain their systems; 2) retire the debt which may have been incurred in constructing their systems; and 3) to replace portions of the system which become functionally obsolete or worn out. Further, the rate analysis is performed to ensure that potential grant recipients are "helping themselves" by charging a "reasonable rate" for water. Some systems become candidates for State grant funds because long term revenue deficiencies have precluded the upkeep of their systems. Other systems become grant candidates due to their inability to cope financially with new requirements in health regulations.

Ultimately the State's goal is to ensure that grant receiving communities will have funds to continuously renew and upgrade their systems. When this is accomplished, it is expected that the utility will have achieved financial self-sufficiency.

AB 198 GRANT PROGRAM REQUIREMENTS

The Board for Financing Water Projects endeavors to provide grants where State funds can restore the financial self-sufficiency of a water utility. This objective is deemed met if the project can be demonstrated to be "economically justified and financial feasible."

"Economic justification" requires that the project obtain benefits proportional to its costs, and that the selected project alternative is the most economical of the solutions considered. This evaluation generally requires the applicant to consider the present worth of the cost of operations and maintenance in addition to initial capital costs. This concept also requires consideration of a "no project" alternative.

When customers regard the water commodity to be worth its cost and are willing to (and have the purchasing power to) pay that cost for an average amount of water, a proposed project is considered to be "financially feasible". Projects which are financially feasible will have revenues which meet or exceed expenses.

REASONABLE RATES

A determination as to whether the grant applicant is charging "reasonable rates" must be made before the Board can award a grant. As the money granted to projects comes from property taxes paid throughout the State, the Board has an obligation to see that grant recipients are contributing a reasonable amount toward water rates before the State awards any grant funds.

A 1991 survey of over 90 water systems around the State showed that many systems charge between $30 and $40 per month for a volume of 22,000 gallons. Of course, some systems charge less, and some others charge considerably more. It is the Board's policy, therefore, that unless there are exceptional circumstances, customers in a community receiving a grant must pay no less than $30 per month for water before the State contributes grant funds. In communities which are financially stronger, the Board may determine that higher rates are reasonable. Another way to calculate a reasonable rate is to base it on 1½ % of median household income for a community. (e.g. 1½ % x $24,000 = $360 per year or $30 per month). In communities with lower median household incomes, a reasonable rate may be lower. (i.e. 1½ % x $20,000 = $300 per year or $25 per month). The Board may also consider other factors impacting the financial strength of the community when making its determination (property tax rates, etc) as to a "reasonable rate".

RATE COMPONENTS

As noted earlier, water rates are expected to provide revenue for three purposes. The first, and most essential use is for operations and maintenance. Falling in this category are the day to day expenses of sustaining the system. Costs placed in this category include salaries and benefits, chemicals, electrical and telephone utilities, repair materials and supplies, small tools, equipment fuel etc. Salaries can be further described as including the costs of field and shop labor, but also the cost of administrative efforts such as meter reading and water invoice preparation. A good system of accounts in a utility will help its managers and directors to understand how much each of various activities contributes to the total cost of running the system.

Secondly, water rate revenues are used to retire debt. Debt retirement means making the payments on loans obtained by the utility. Loans may have been received from credit unions or banks, or through the sale of general obligation or revenue bonds. Loans impact both the balance sheet and income statement of a utility. The amount of the loan payment due in the current year must be obtained from current water rates, or some other source such as property taxes which can be collected by the utility.

Thirdly, water rate revenues are used to fund depreciation. Depreciation is simply a value assigned to the loss in value of a utility's assets. It recognizes that over time, each of the components of a system wears out or becomes functionally obsolete (undersized for example). All

systems must have regular investments in new facilities or they will fall behind current standards for performance, reliability, and safety. The Division and the Board regard continual reinvestment in a system to be crucial to its ongoing viability.

DEPRECIATION - CAPITAL REPLACEMENT FUNDS

The Division calculates depreciation using life expectancies for water facilities as tabulated by the National Association of Regulatory Utility Commissioners. Large and new systems with rigorous maintenance regimens are expected to get the longest lives from their facilities. Older and smaller systems, and those whose maintenance work is only done when it can not be postponed longer are not expected to have as long lived facilities. For the purposes of the grant program however, midrange life expectancies are used for all projects.

It is the State's perspective that *every* utility should contribute annually to renewal and replacement of its system. The amount of the contribution should be no less than the amount of the depreciation. If a utility is severely aged, larger reinvestment in the system is necessary if the system hopes to remain operational or make up for postponed improvements.

When a grant is awarded to a community to provide for construction of new facilities, it is the State's expectation (and requirement) that the utility will provide not only for the maintenance and operation of the facility, but also for the periodic renewal of the facility. The State does not consider a system "viable" or a project "financially feasible" if it is financially unable or unwilling to support the project. Therefore the State requires that utilities receiving grant funds budget for system renewal. System renewal may be identified in several alternate ways. Funding depreciation is one. Another is through contributions to a capital reserve account (where funds can be accumulated for construction projects). Yet another is to set aside funds each year for capital replacement projects which reach the top of the utility's prioritized project list.

Whichever version of budgeting is chosen, the utility must demonstrate that it invests a reasonable amount of money each year in "capital improvements".

"Capital improvements" are typically high cost items with long service lives. Included are the distribution pipe mainlines, treatment plants, storage reservoirs, wells and surface water intakes, etc. Capital improvements may also include heavy equipment, buildings and other long life investments. Expenditures which qualify as capital improvements are generally only approved by the governing board of a utility. These expenditures are typically planned a year or more in advance, and constructed after funds for the project have been secured.

Capital improvements do not include such minor expenses as repair clamps, inventory parts and fittings, spare pieces of pipe kept to facilitate repairs, small tools, maintenance supplies such as paint or grease, service contracts, and other such day to day supplies. Expenses for these items are properly classified as "operation and maintenance" expenses.

It is prudent to replace obsolete facilities before a utility expands. Further, it is not appropriate to use capital funds received from existing customers for system expansion, that is, to extend

mainlines to serve new areas or customers, to install new services, or for repairs instead of replacement of water lines.

Funds for the expansion of the system should come from connection fees, assessments, or other sources so that those benefitting from the improvement contribute the funds for its construction.

Therefore, where necessary, the State imposes a condition on grants to ensure that capital funds raised as a component of water rates are used for the benefit of the existing customers, and specifically for the *replacement* of existing capital facilities. The State may require a utility to contribute an amount each year to a special fund created for facility replacement. The amount to be contributed to the fund can be calculated by dividing the grant amount by the total project amount, and multiplying the resulting percentage by the annual depreciation of the entire project.

SUMMARY

To ensure the continued viability of water systems receiving State AB 198 grant funds, the Board for Financing Water Projects requires that any system requesting and receiving State grant money must contribute reasonable and sufficient amounts each year to capital replacement projects.

MEMORANDUM

DATE: September 17, 1998

TO: Board for Financing Water Projects

FROM: Craig C. Steele P.E., Grants Administrator
Division of Water Planning

SUBJECT: Board Policy on When Deposits Are to Be Made to the Depreciation Account

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The Board for Financing Water Projects has a policy which requires that grant recipients shall deposit an amount each year to a fund dedicated to capital replacement projects. The policy is titled the **Board For Financing Water Projects - POLICY ON REASONABLE WATER RATES & DEPRECIATION** and is dated March 4, 1998. The question has arisen as to when the deposits must begin.

As the AB 198 grant program is a program for financing capital improvements to community water systems, the following conditions will describe the context in which the Board is establishing the requirement for the dates of the first and subsequent deposits.

1. The grant applicant is commonly the owner of a system which has fallen into disrepair, a system which has not had annual investments in capital projects, a system where the customers have not been required to pay the true cost of sustaining the system.

2. The applicant has been in communication with the administrators of the grant program for 6 months or more, and has received approval for a Letter of Intent. The Board's Policies, including this one, will have been made available to the grant applicant during this period. The applicant will be cognizant of the Board's requirements.

3. Concurrently with the advancement of the applicant's AB 198 grant application, the applicant will be developing sources for a financial match to the State's grant. The applicant will not necessarily know what amount will be received from the AB 198 grant program, and therefore can not know how much match will be required. Final financial

arrangements for the ineligible components of the project, and the match for the eligible components of the project will not be possible until the Board has set the amount of the AB 198 award.

4. Some time will be required for most applicants to comply with AB 198 grant conditions and other program conditions before a project is completely ready to go. A few of the more sophisticated applicants may move their schedules quite rapidly to construction, if they have, for example, been pursuing financing, permits, and design concurrently with the grant application. Others will have to obtain water rights, acquire land, receive governmental permits etc before they can proceed. As these permits may be "deal killers" the State will not enter into a funding agreement (formally commit funds) until the vulnerability of the project to such project stoppers has been removed.

5. A standard condition imposed with a grant award requires that the recipient adjust rates to ensure that the revenues for the utility are equal to the true cost of sustaining the utility. The value of any adjustment will include recognition of the depreciation on the grant portion of the project (an example is calculated below), and may be an amount specified in the Staff Report. The depreciation requirement may be adjusted downward by staff if the project is completed under budget.

6. In conjunction with the rate adjustment required to fund depreciation, the utility must frequently make a rate adjustment to provide for debt retirement on any loan obtained as match to the grant. The adjustments which occur in accordance with this and the preceding paragraphs must be made before the State will enter the funding agreement. The State can not consider the match to the grant to be secured if it relies on a rate increase which has not yet been approved by the utility's board.

7. It is expected that most funding agreements for most projects can be signed within 3-9 months after the grant award. During the 3-9 month period, the utility can implement their water rate adjustment and begin accumulating the funds necessary to comply with debt retirement and depreciation deposit requirements.

8. In order to explain the mathematics for the calculation of the Board's depreciation requirement the following example is provided:

a.	Total cost of the project	$3,000,000
b.	Ineligible portions of the project	$1,000,000
c.	Net Eligible portion of the project	$2,000,000
d.	Proposed grant percentage	75%
e.	Proposed grant amount	$1,500,000
f.	Weighted Life Expectancy (per NARUC)	50 yrs
g.	Depreciation on project $3,000,000/50 yr life	$60,000/yr
h.	Grant % of project = $1,500,000/$3,000,000	50%
i.	Depreciation deposit required/yr = 50% x $60,000	$30,000

8. As stated in the Board Policy cited above in the first paragraph, the depreciation amount deposited in the Capital Replacement Projects Fund is to be spent only for the renewal and replacement of existing portions of the system. The projects are to be selected from the top of a prioritized list of capital projects, and only can be chosen or approved by the governing board of the utility.

9. The depreciation of a system is a value for the slow but constant degeneration associated with becoming worn out or functionally obsolete. It will therefore commence as an expense not later than the date the system is placed in service. It is therefore important that the water rates for the community be in full effect before the system is placed in service.

10. If the rates are effective (as they must be) at the time the system is placed in service or the contractor is given the notice of completion, then the utility should be capable of starting monthly deposits to the capital replacement projects account at the same time.

11. Cash flow constraints may, however, adversely impact a utility's ability to make deposits starting the month the new system commences service. The expense associated with the transfer of customers to the new system should have already been experienced, but the new startup costs for some systems may place early demands on the utility's funds. This startup cost may be highest with water treatment plants as efficient operation of the plant must be learned. Startup of distribution systems, wells, and storage however is less likely to place any undue financial hardship on a utility.

With the above premises the Board determines that a utility owner must start calculating depreciation of their system: 1) on the date that it is accepted from the contractor; or 2) the date that the system first begins delivering water to the customers for consumption; whichever is earlier. The calculated amounts should be received from rates monthly, and therefore an effort should be made to deposit them monthly. Recognizing the impacts of the economy and season on water consumption and therefore revenue, however, suggests that monthly deposits of the full depreciation amount should only be a goal. Therefore the Board will permit a utility to forego payments from time to time, provided that the full amount of depreciation required of the system is deposited no less frequently than quarterly.